

Delaware River Basin Commission

Hydrologic Conditions

Anthony Preucil

Water Resource Scientist

Water Management Advisory Committee

June 16, 2022

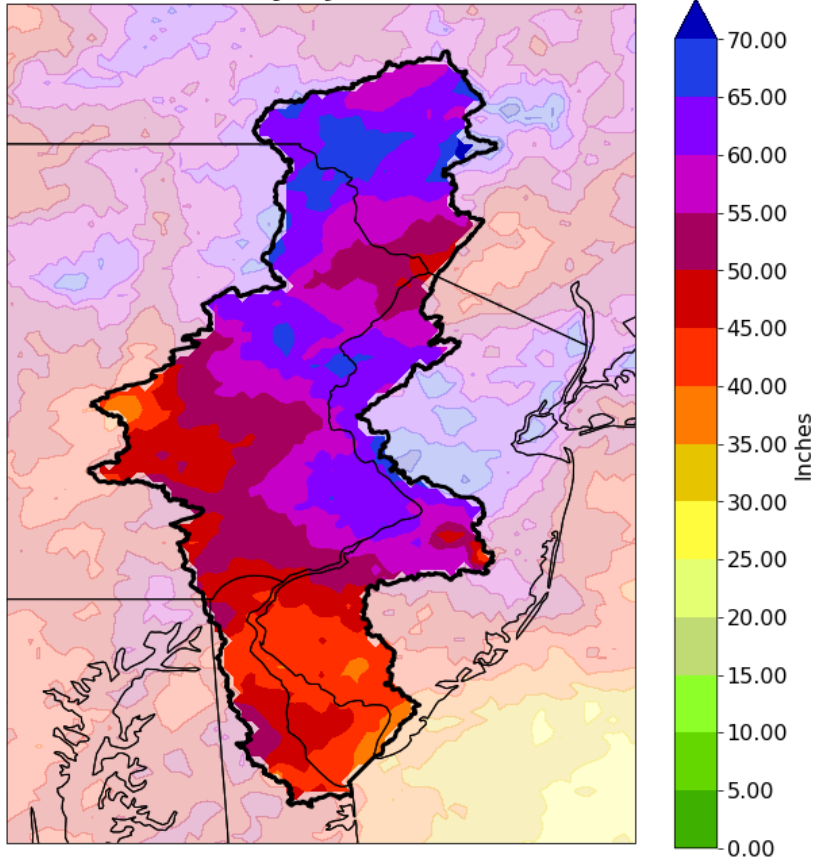
Presented to an advisory committee of the DRBC on June 16, 2022.
Contents should not be published or re-posted in whole or in part
without permission of DRBC.



365 Day Precipitation

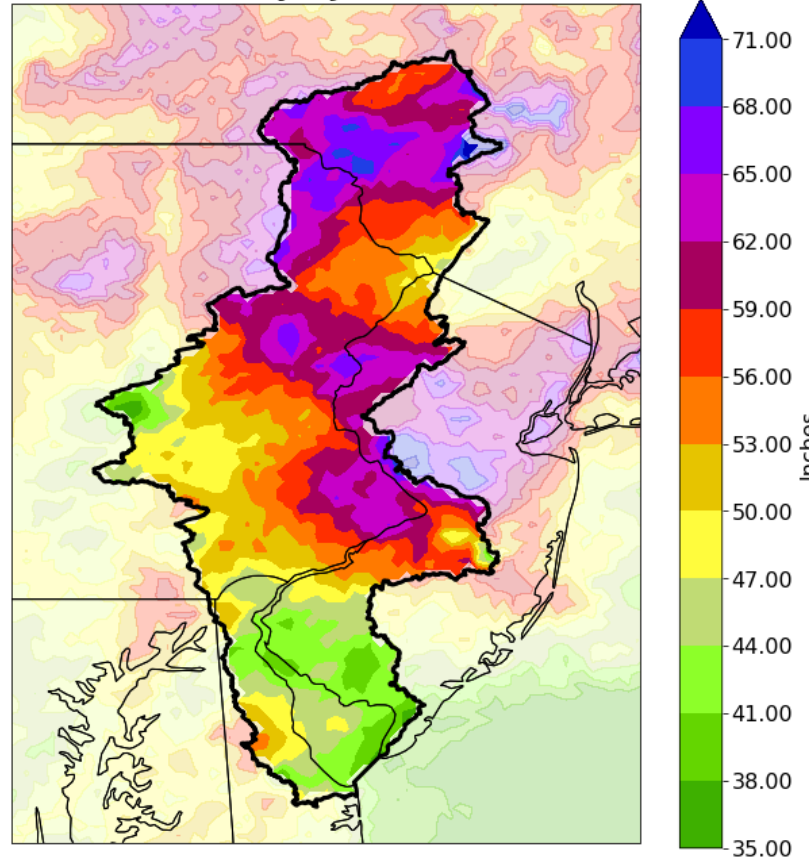
NORMAL: 45 – 52 inches

**Total Precipitation Accumulation
Last 365 days (June 15, 2022)**



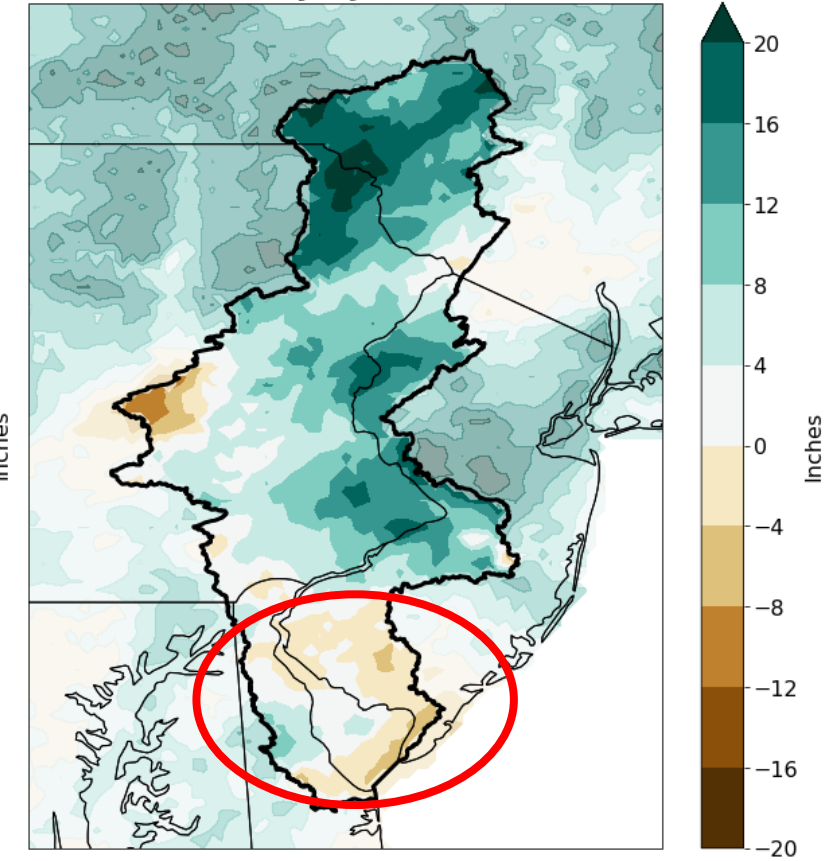
Includes Tropical Systems from 2021

**Total Precipitation Accumulation
Last 365 days (June 15, 2022)**



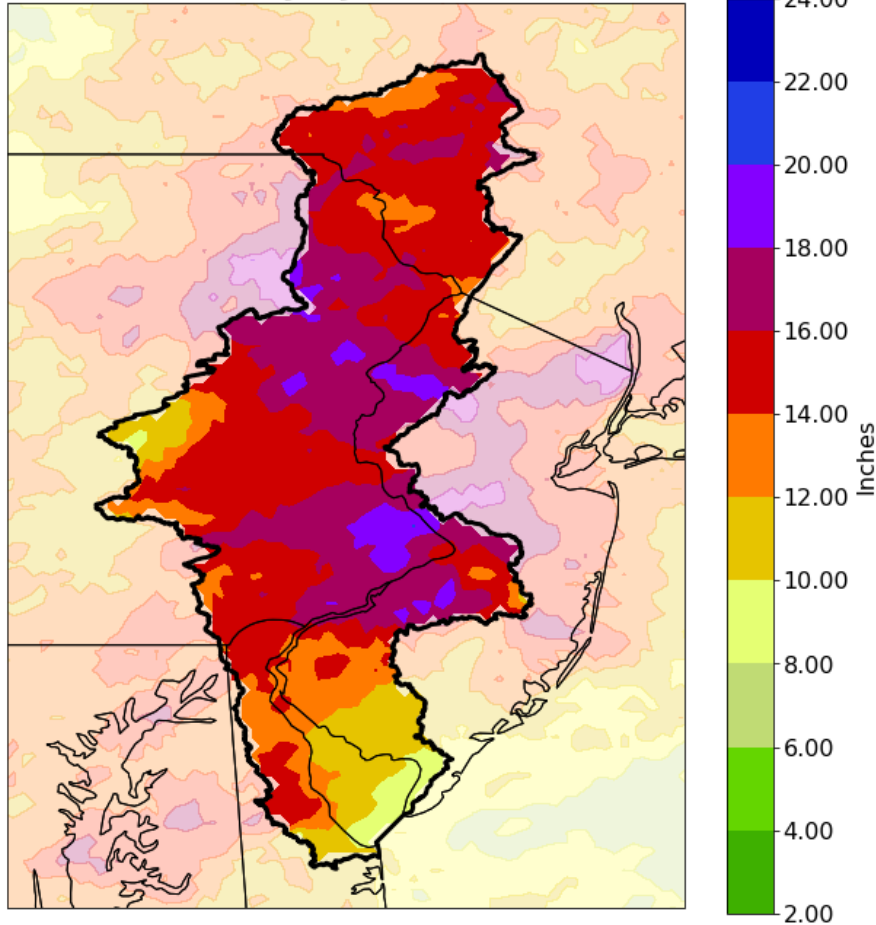
Note: Zoomed Scale

**Departure from Normal Precipitation
Last 365 Days (June 15, 2022)**

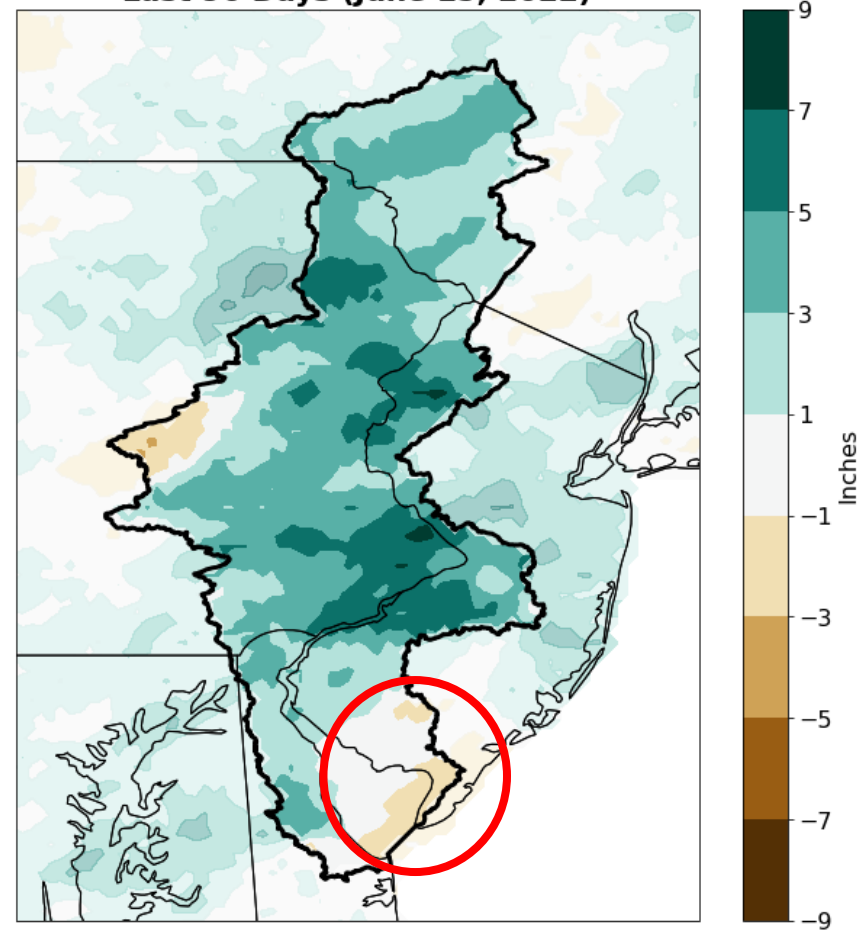


90 Day Precipitation

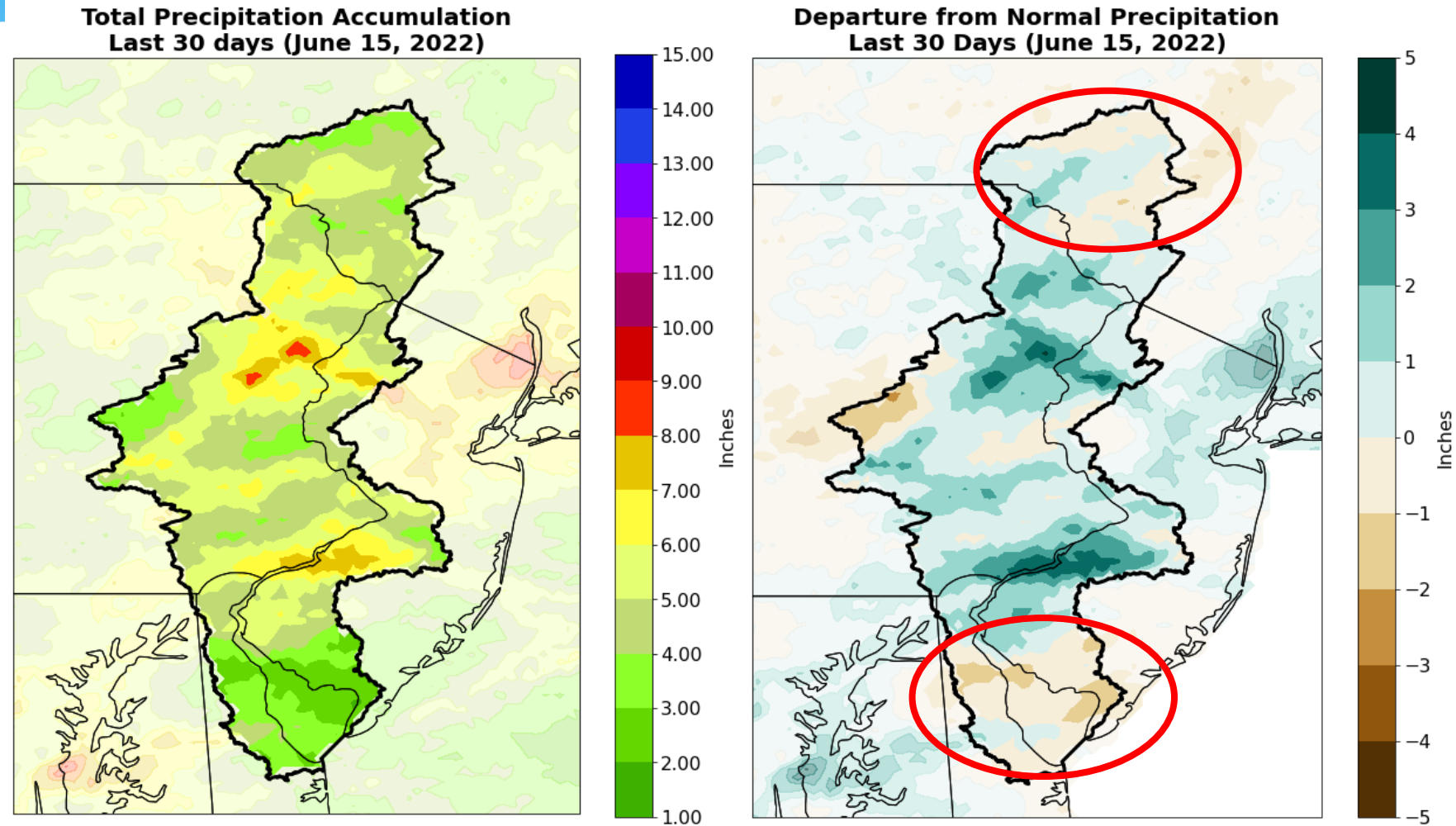
**Total Precipitation Accumulation
Last 90 days (June 15, 2022)**



**Departure from Normal Precipitation
Last 90 Days (June 15, 2022)**



30 Day Precipitation

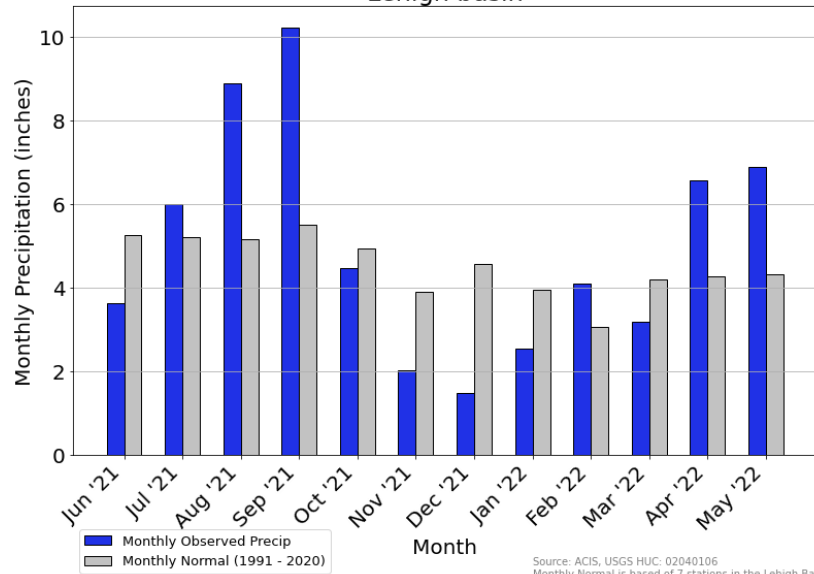


Data Source: AHPS

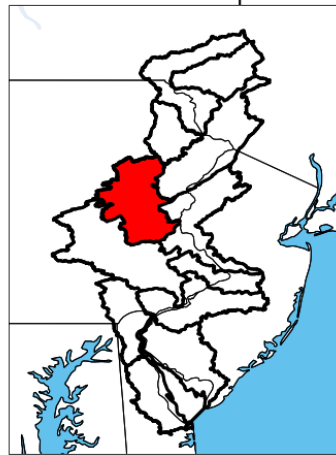
New!

Precip by HUCs

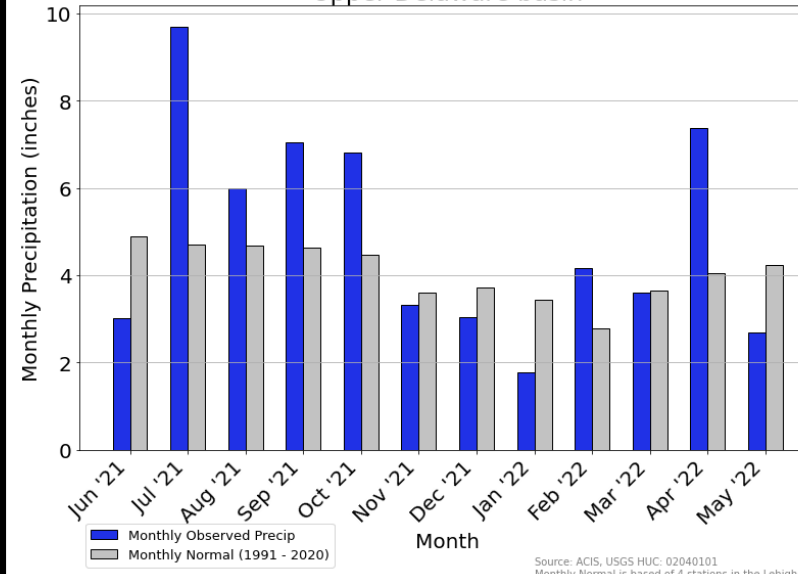
Monthly and Normal Precipitation
Lehigh basin



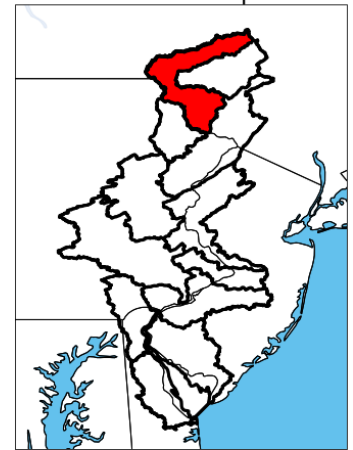
Locator Map



Monthly and Normal Precipitation
Upper Delaware basin











Locator Map

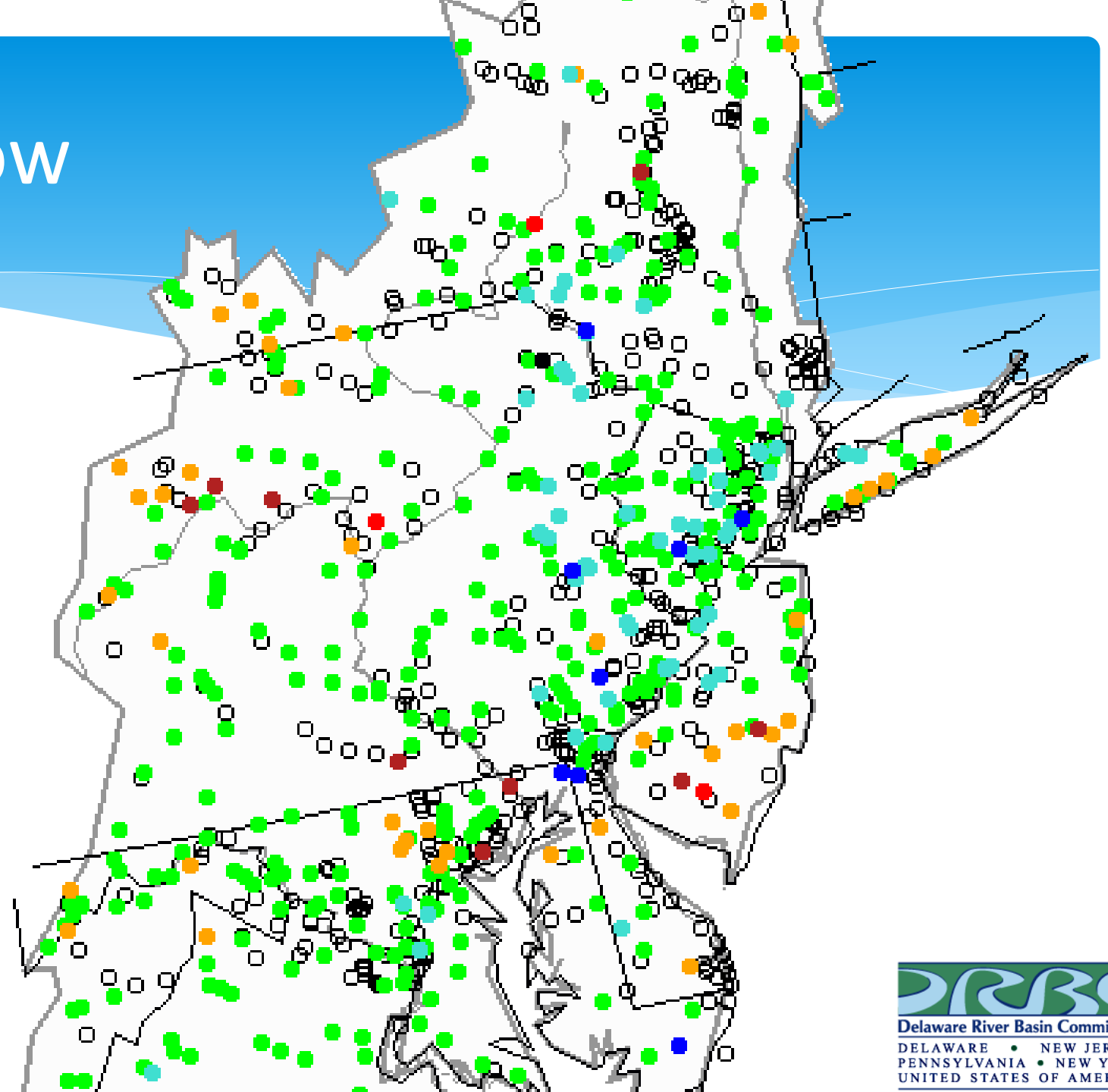


Streamflow

Explanation - Percentile classes

							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

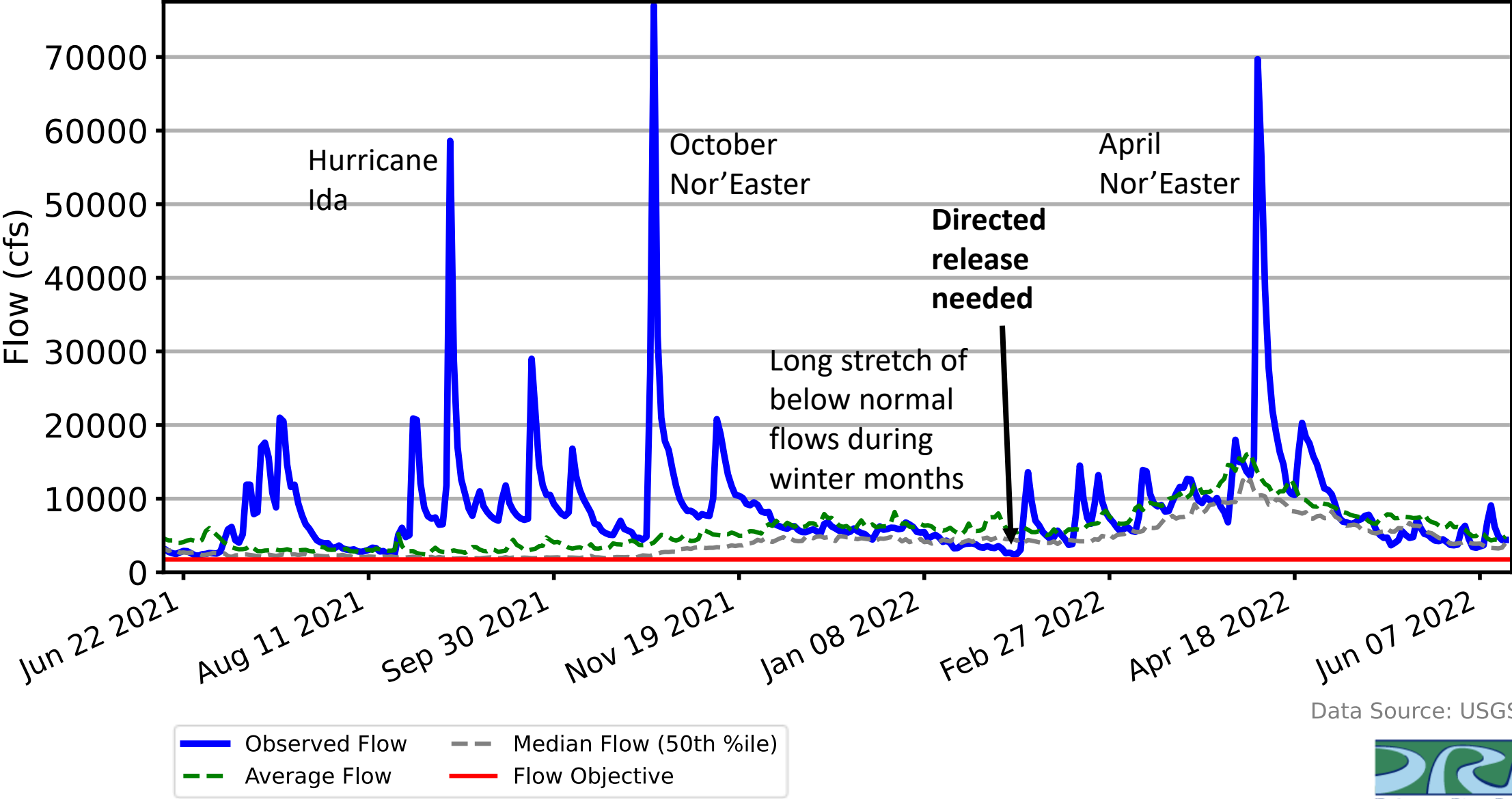
Map last updated: 8:30 AM June 16, 2022



Data Source: USGS

Updated: 2022-06-15 15:21

Flow at Montague, NJ

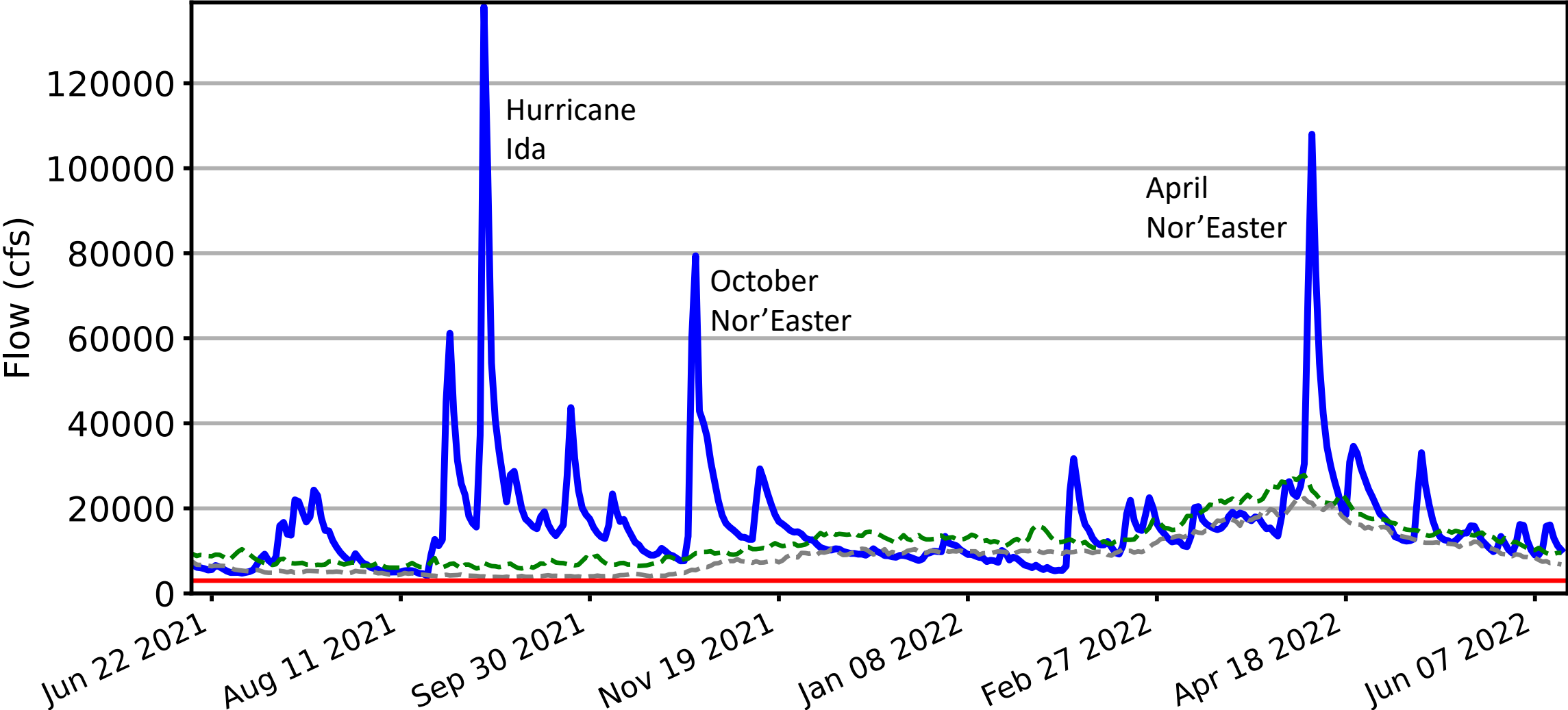


Data Source: USGS



Updated: 2022-06-15 15:21

Flow at Trenton, NJ



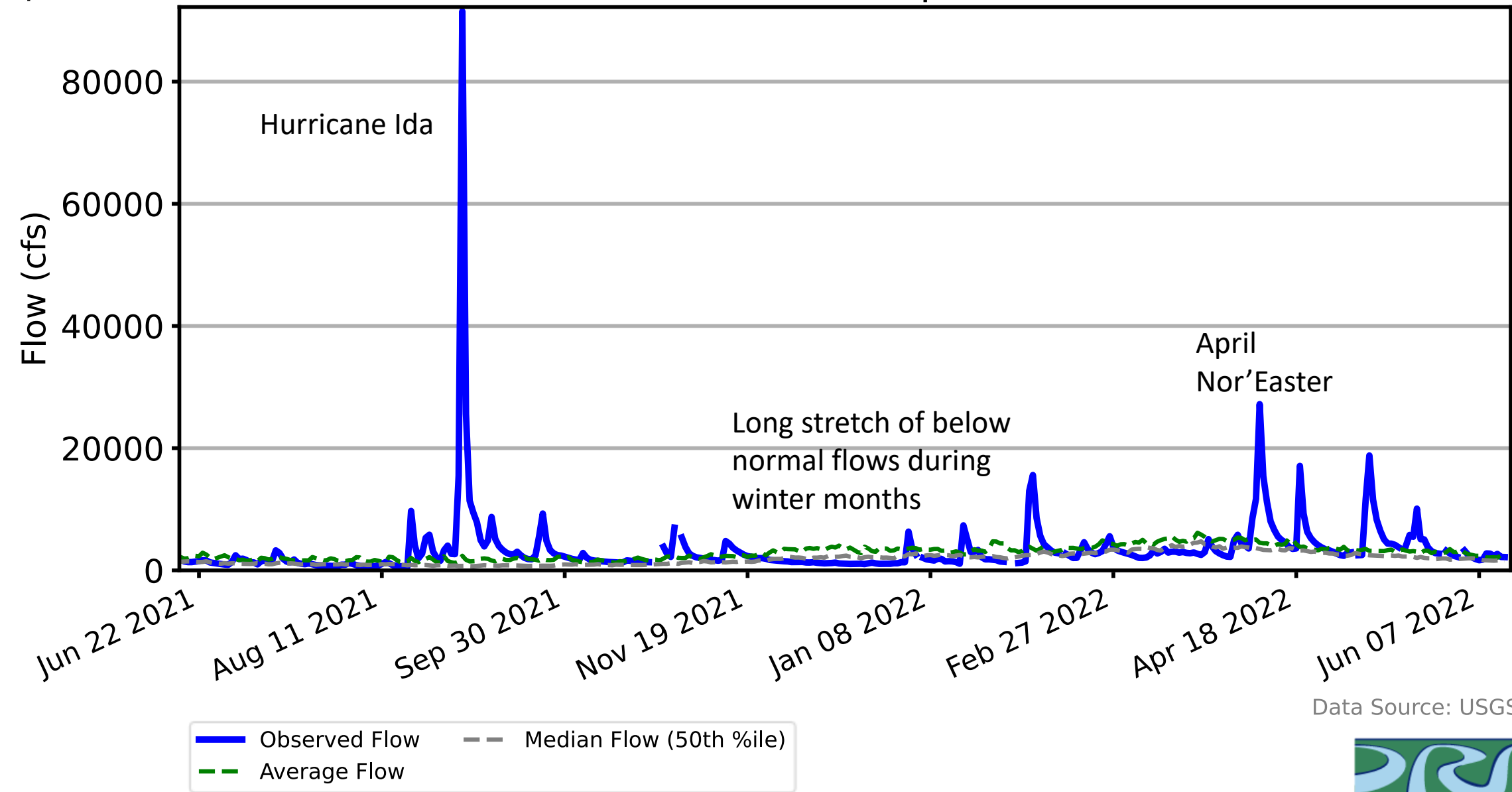
- Observed Flow
- Average Flow
- Median Flow (50th %ile)
- Flow Objective

Data Source: USGS



Updated: 2022-06-15 15:21

Flow at Philadelphia, PA



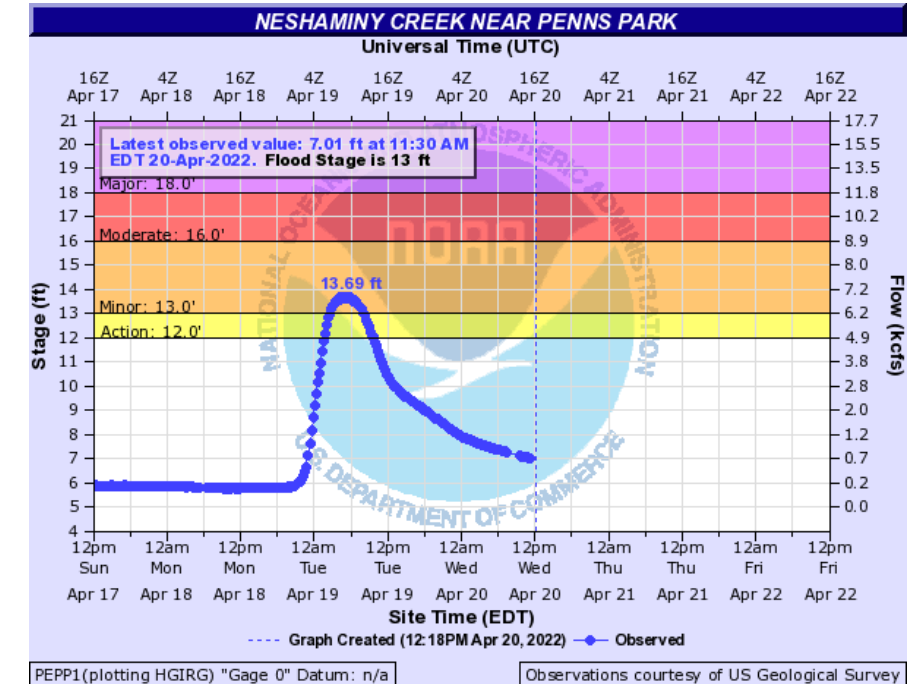
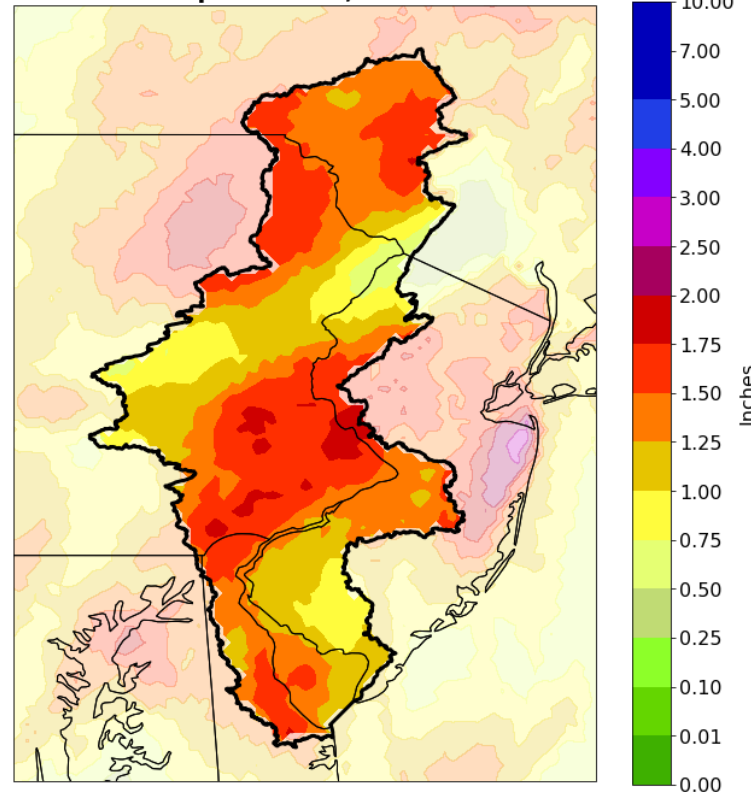
Data Source: USGS



April 2022 - Nor'Easter and Flooding

- * On April 18, a late-season Nor'Easter type storm system led to widespread heavy rain across the basin
- * The basin received between 1-2 inches of rain over two days
- * Action Stage was Reached:
 - * Chester Creek
 - * White Clay Creek
 - * Red Clay Creek
 - * Schuylkill River
 - * Neshaminy Creek
- * Minor Flooding occurred along:
 - * Neshaminy Creek
 - * Christina River
 - * Brandywine Creek
 - * Perkiomen Creek
- * Additional, Flooding occurred at nine Tidal gage locations

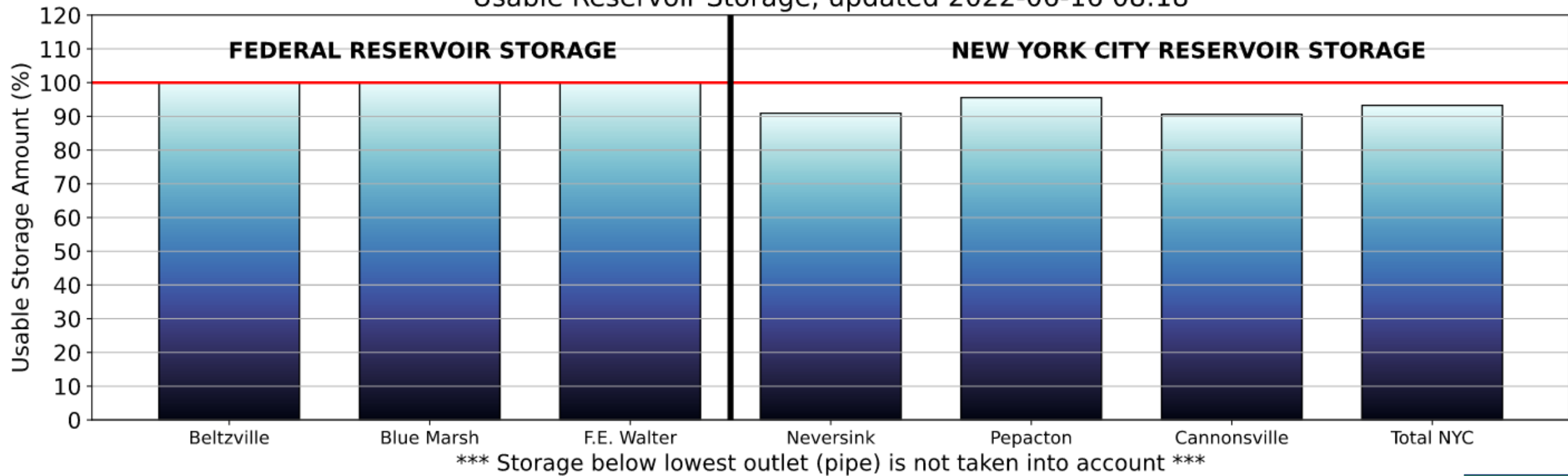
Total Precipitation Accumulation
April 18 - 19, 2022



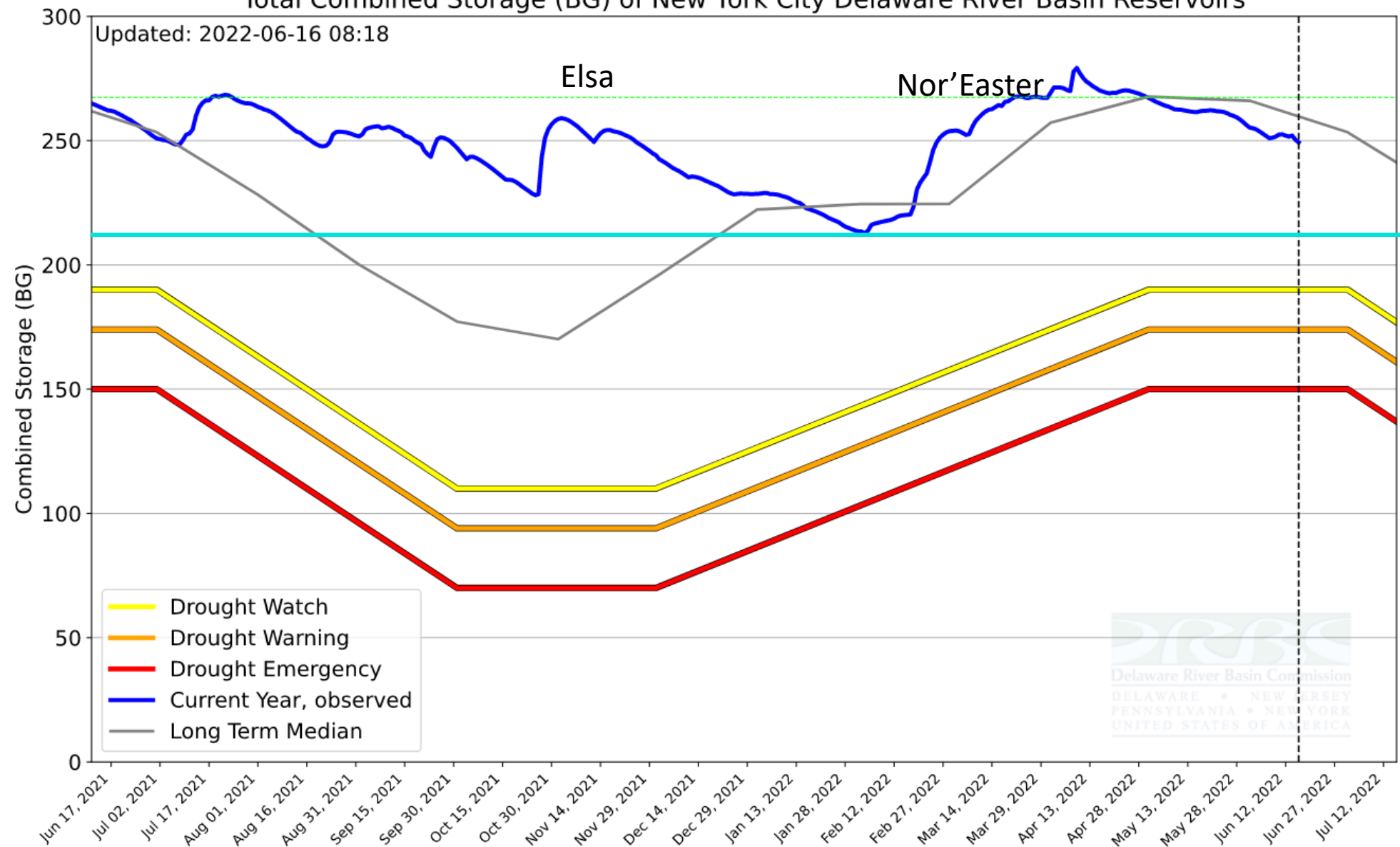
Data Source: AHPS

Basin Storage

Usable Reservoir Storage, updated 2022-06-16 08:18



Total Combined Storage (BG) of New York City Delaware River Basin Reservoirs



Usable Storage
BG
%

Cannonsville
84.7
90.6

Pepacton
133.1
95.6

Neversink
31.5
90.9

Total
249.3
93.2

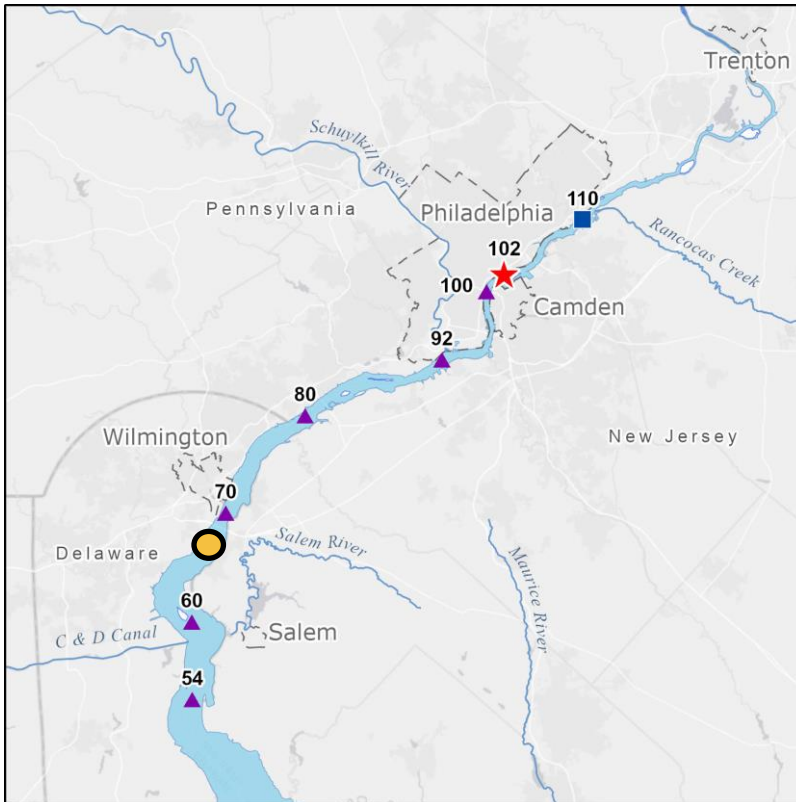
BG above drought watch = 59.3
BG above drought warning = 75.3
BG above drought = 99.3

BG below median = 10.4
BG below one year ago = 12.7

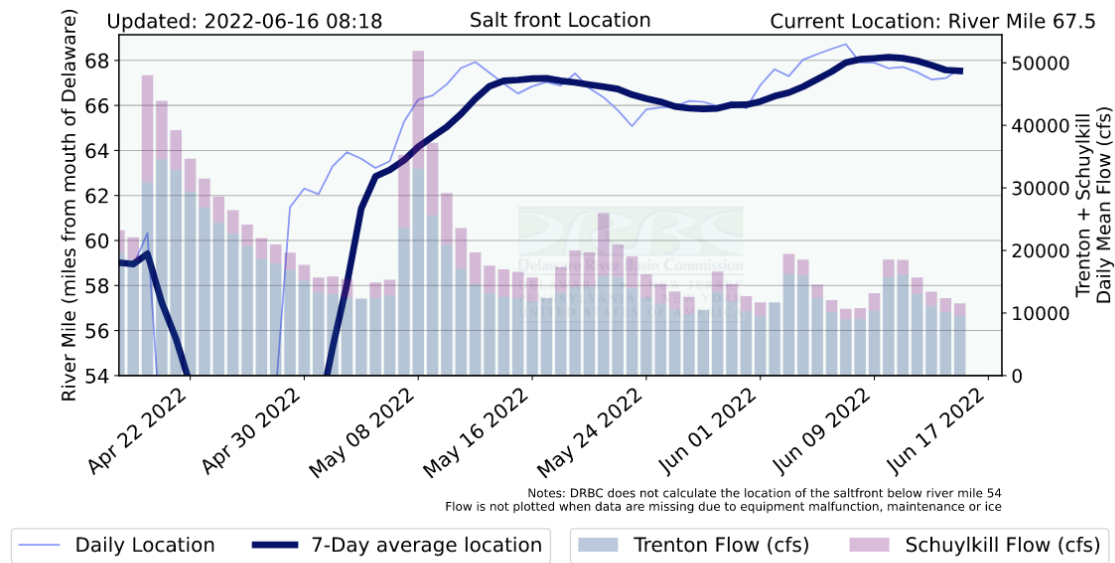
Salt Front

hydrosnap.drbc.net

Current Location: South of Delaware Memorial Bridge



● = current location



Chlorides

7-Day Average RM Location
of 250 mg/L

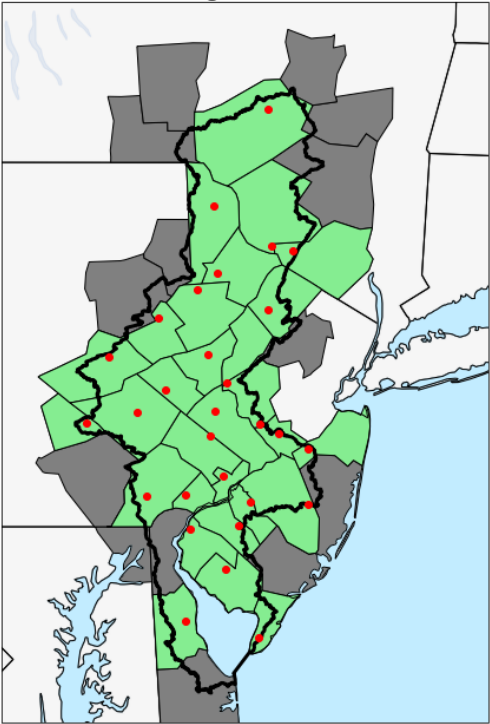
Current (06/16/2022): 67.5
June Median: 69

The Flow Objective at
Trenton was designed to
repel salinity for the
protection of drinking
water treatment facilities
and industrial intakes.

New,
Experimental

Groundwater Conditions

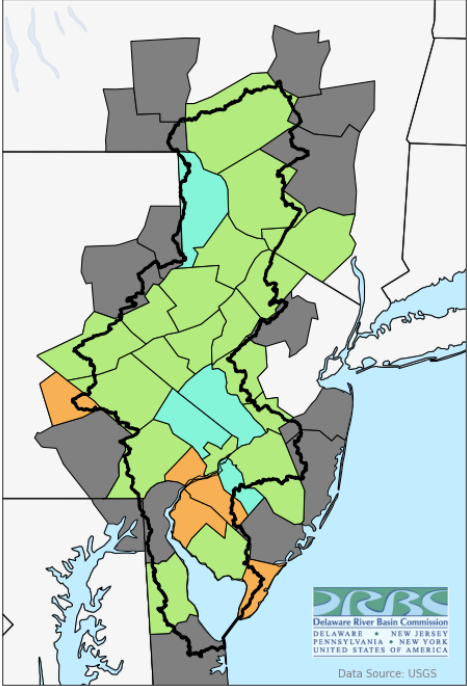
Location of groundwater wells



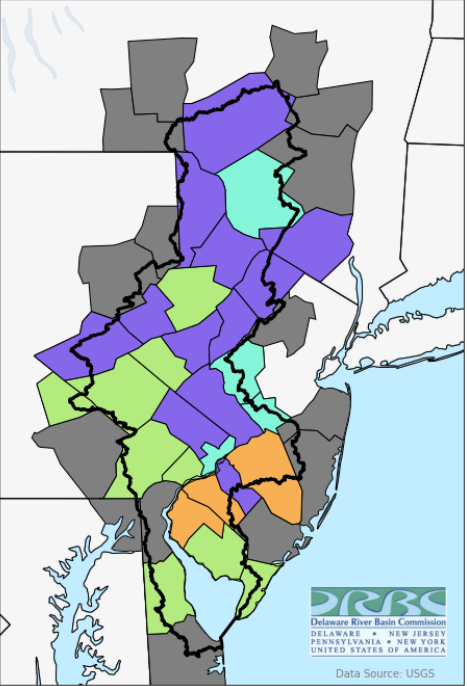
Wells chosen based on
location and length of record

Data Source: USGS, DGS

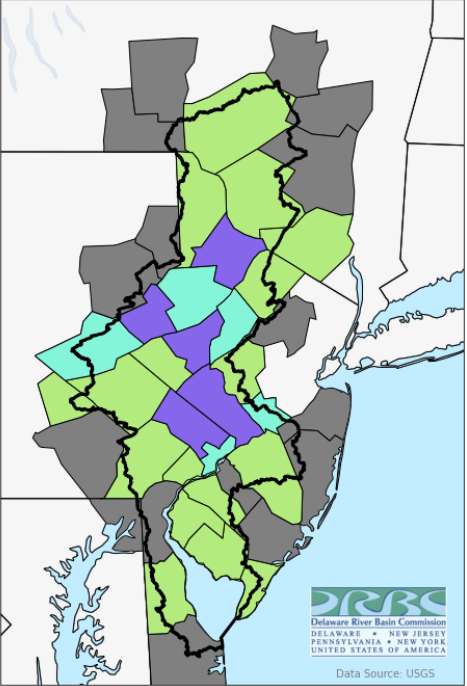
Groundwater Ranking on March 14, 2022



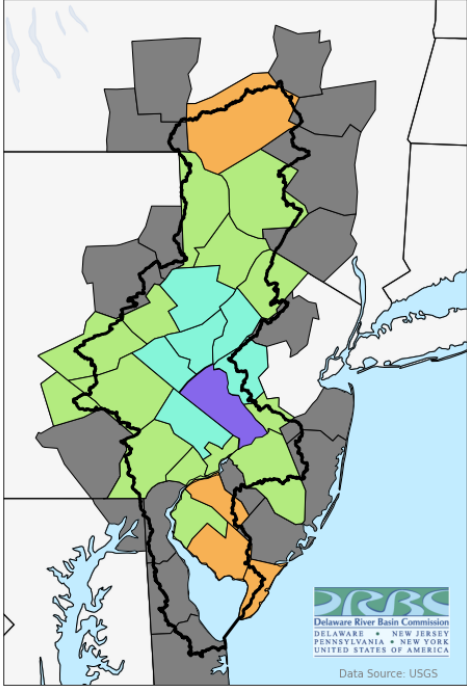
Groundwater Ranking on April 14, 2022



Groundwater Ranking on May 14, 2022



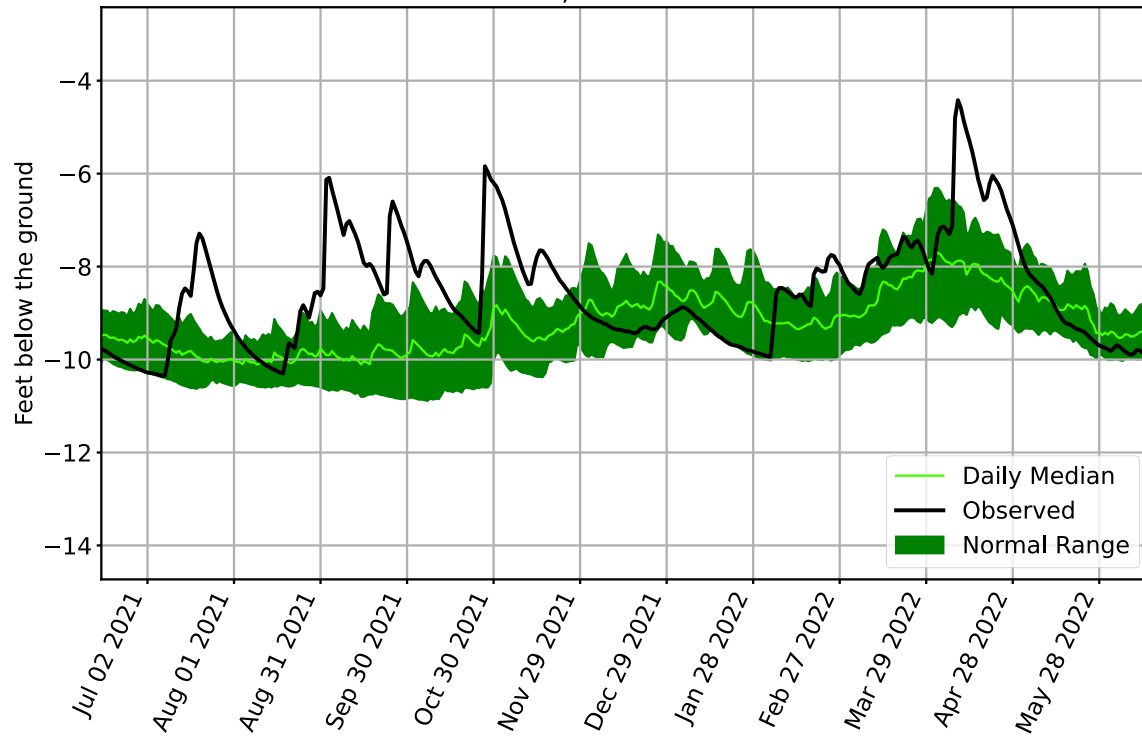
Groundwater Ranking on June 14, 2022



Select Groundwater Time Series

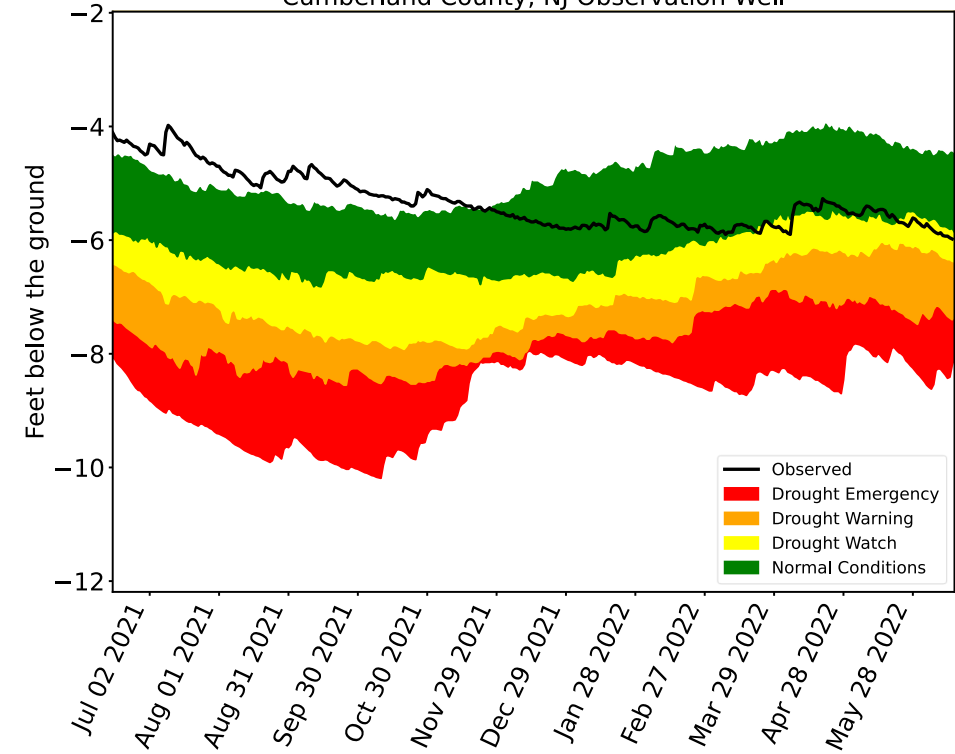
Upper Basin

Woodbourne, NY Observation Well



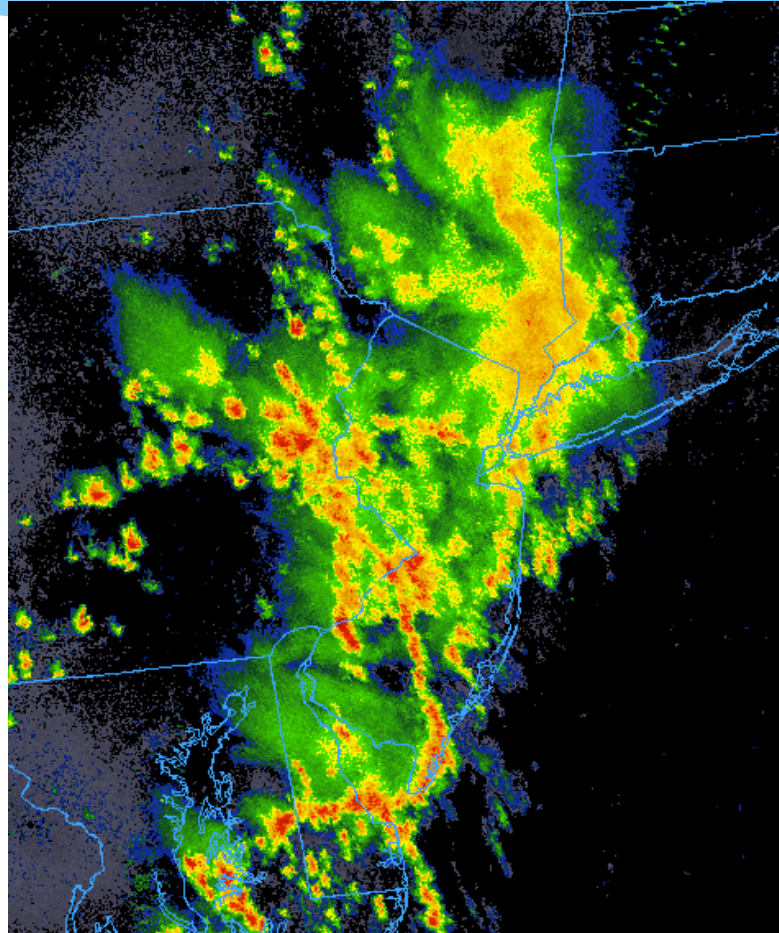
Lower Basin

Cumberland County, NJ Observation Well



Near Future Hydrologic Impacts

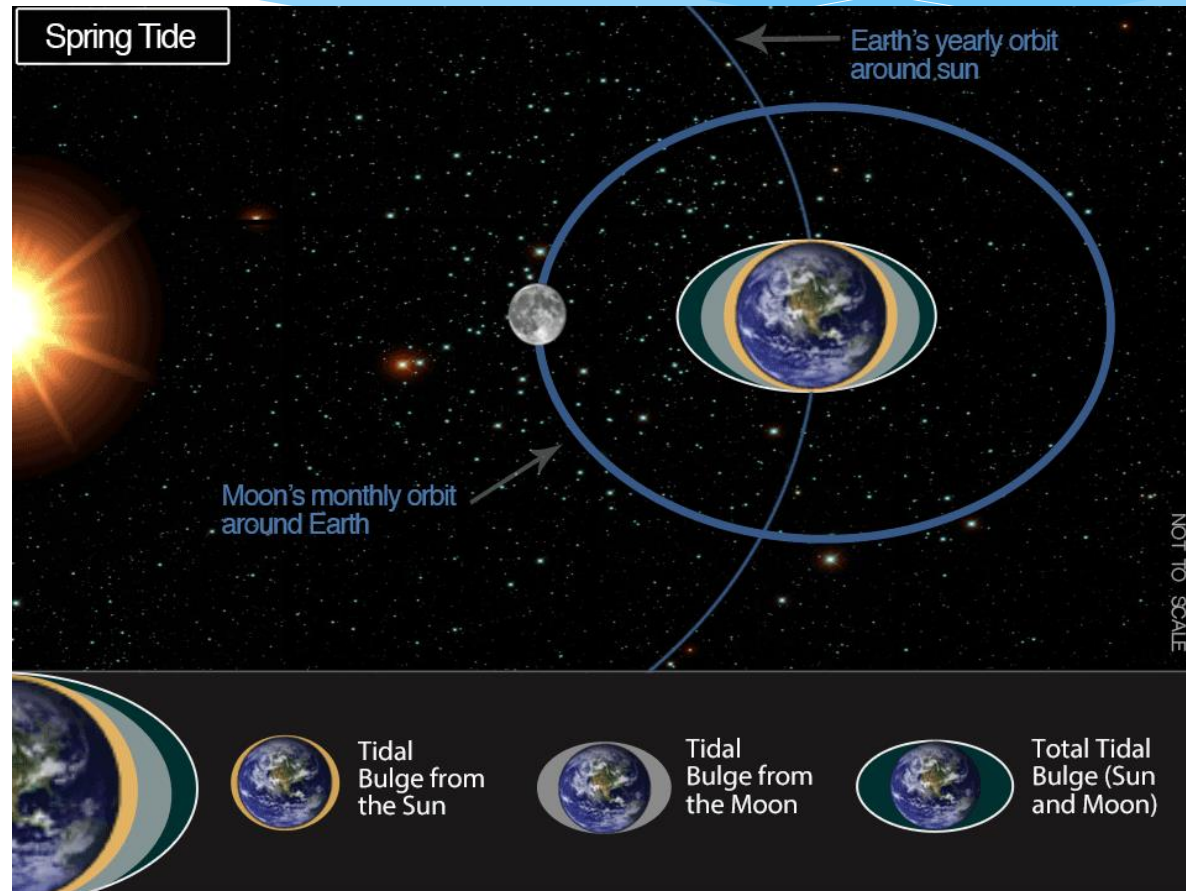
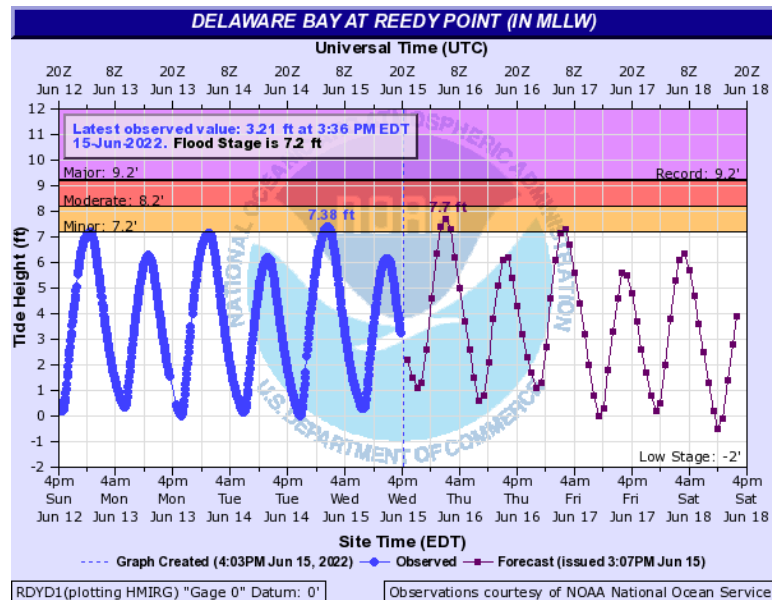
- * Showers and storms moving through this morning, river flooding not forecast to occur
- * Coastal flood advisory has been cancelled, more possible tomorrow morning



<https://www.wrh.noaa.gov/zoa/getobext.php?sid=KTTN>

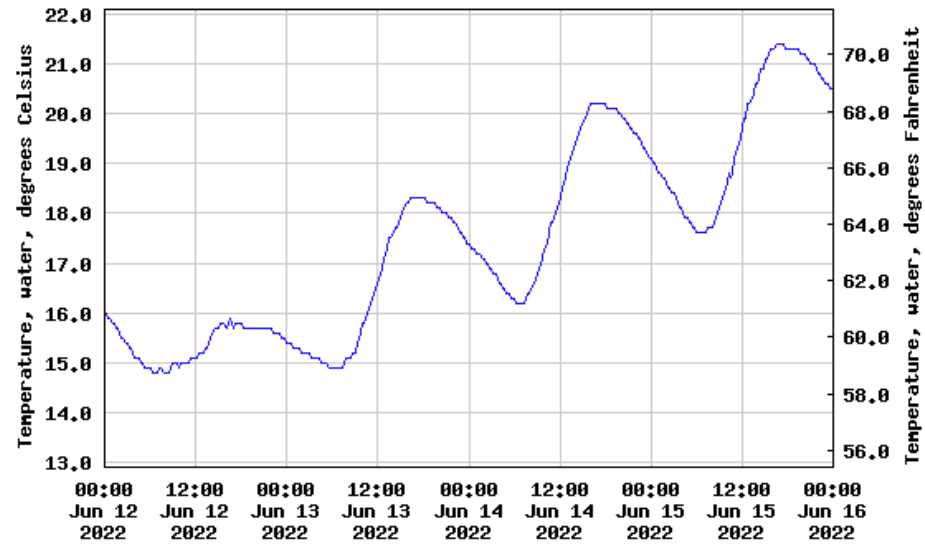
Coastal Flooding Ongoing

Full Moon occurred
on June 14



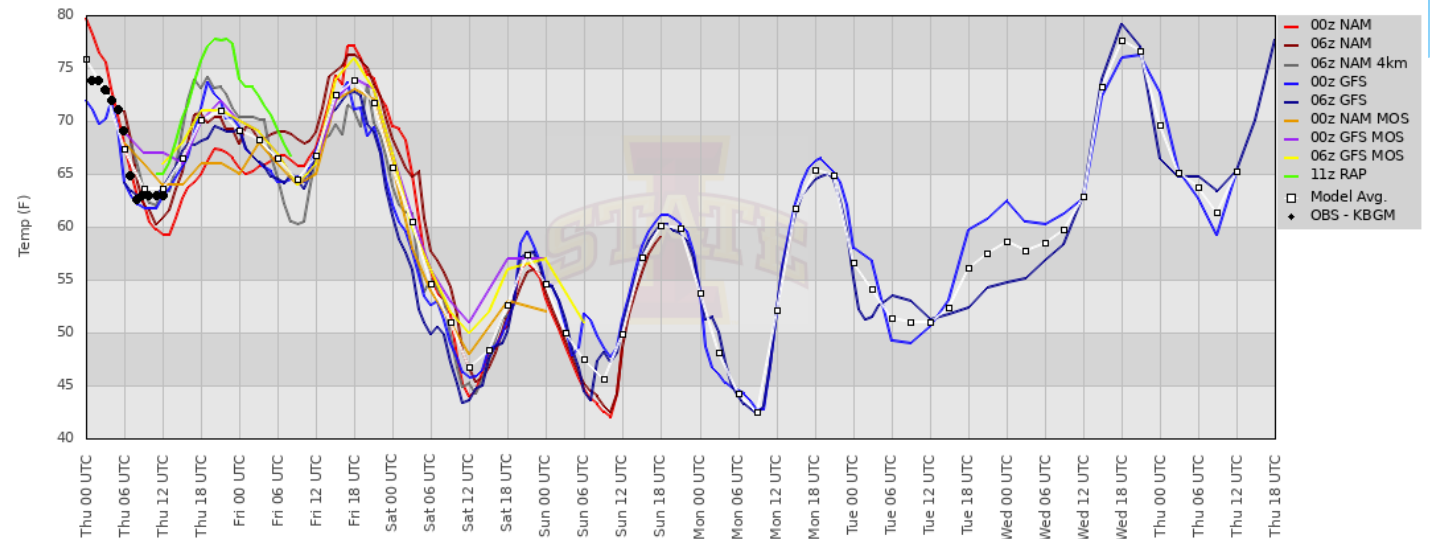
Upper Basin Thermal Releases

USGS 01427207 DELAWARE RIVER AT LORDVILLE NY



Start: 2022-06-16 00:00:00 UTC
End: 2022-06-23 18:00:00 UTC
Generated: 2022-06-16 12:41:47 UTC

KBGM - Hourly Temperature Forecast



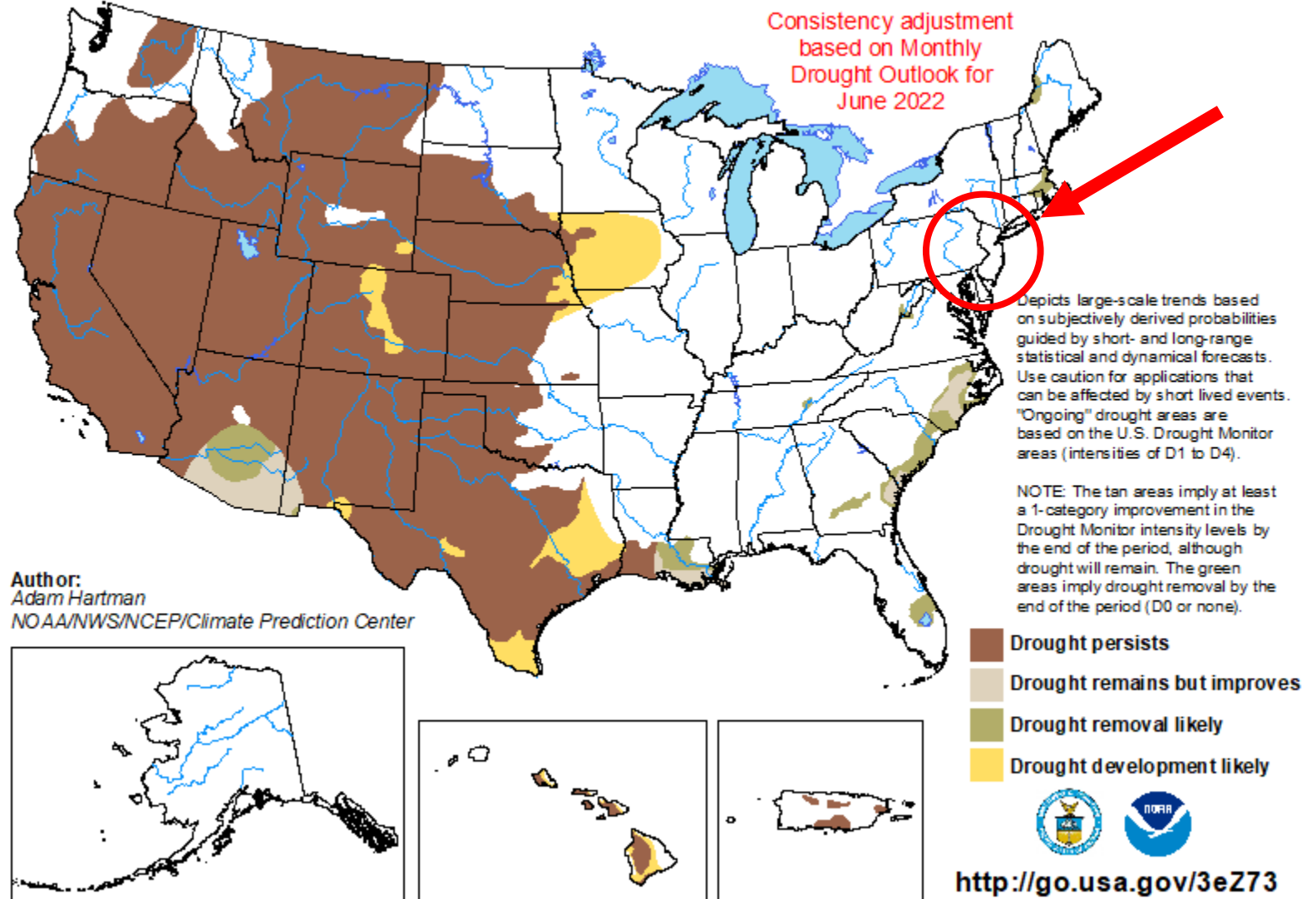
- * Goal is to reduce the number of days water temperature is above 24 degrees C
- * One thermal release was made in May 2022

Drought Monitor

June 16, 2022

U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for June 1 - August 31, 2022
Released May 31, 2022

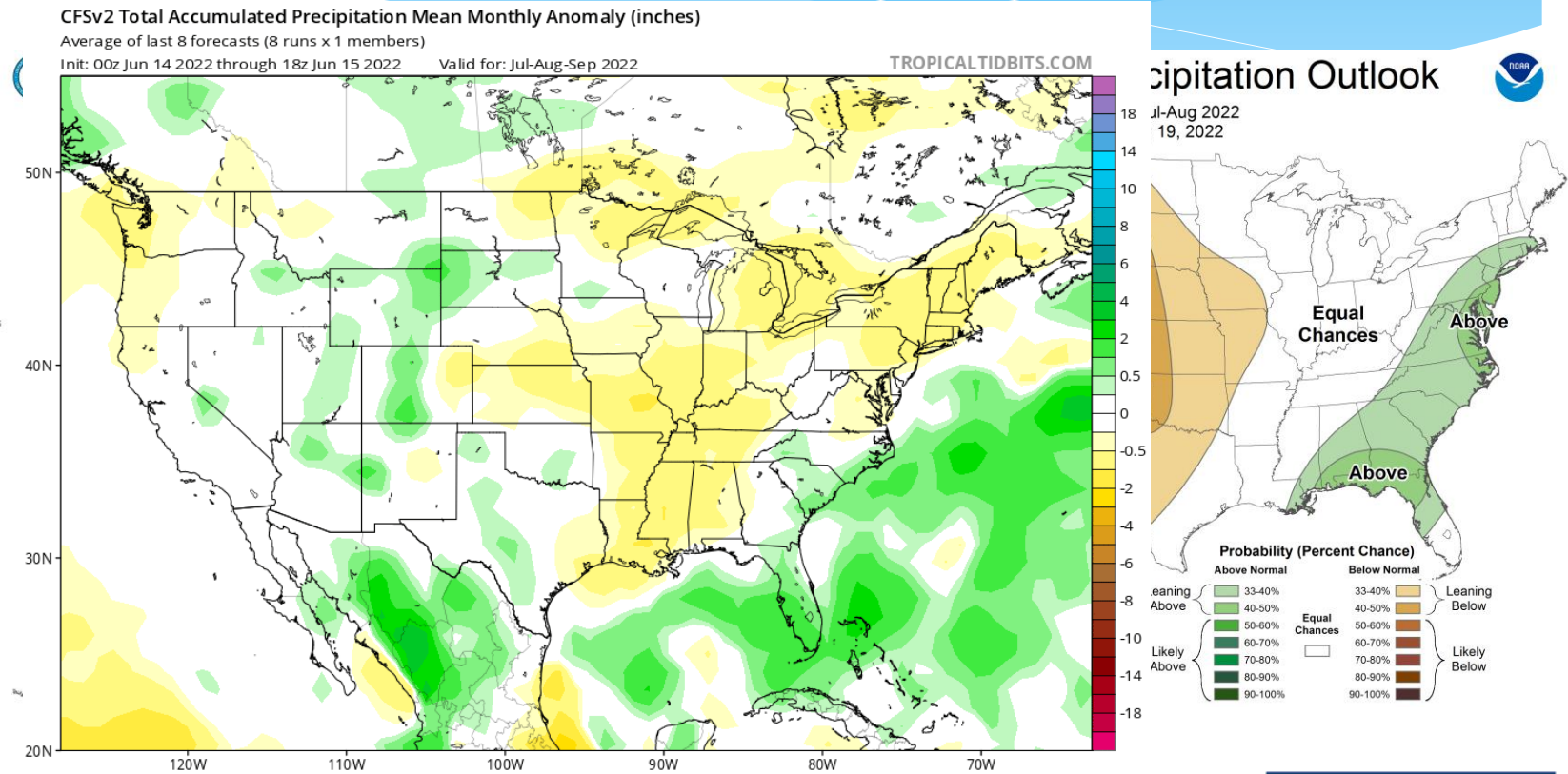
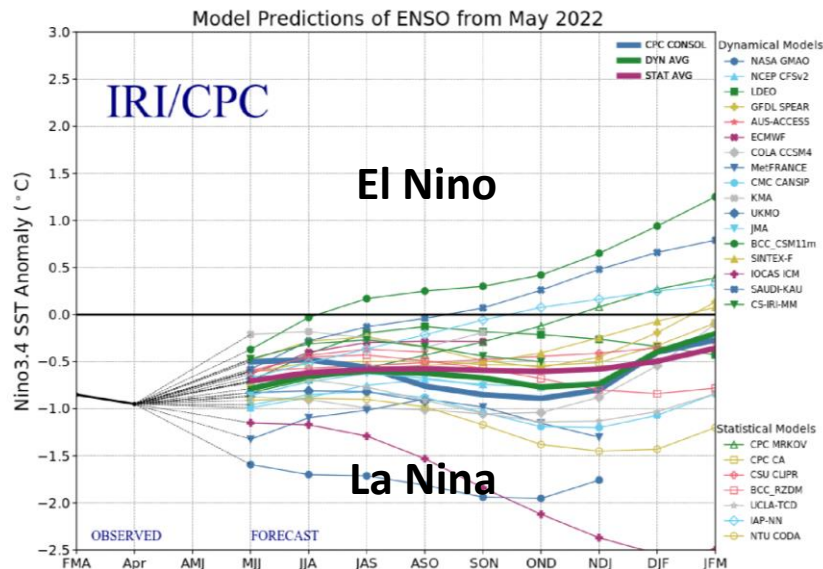


Summer Outlook 2021 - 2022

La Nina continuing, but weakening

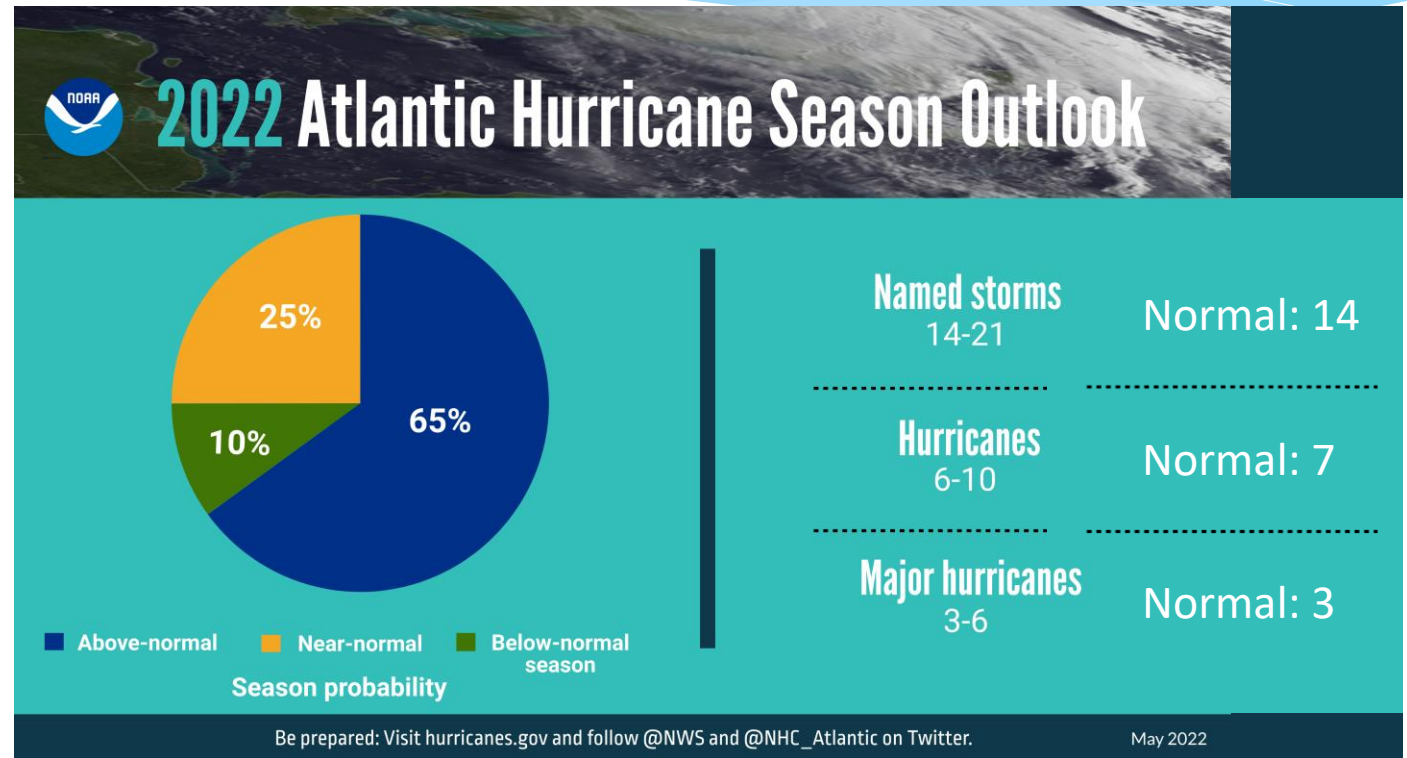
La Nina advisory in affect

This summer will be similar to last summer



Hurricane Season Outlook

- * NOAA Forecast for above average season (similar to 2021 season)
 - * Note: A Detailed Analysis of the 2021 Hurricane Season and specific impacts to the DRB is now available on the DRBC website as part of the Annual Hydrologic Conditions Report
- * Hurricane Season began June 1 and ends November 30
- * Peak season is in September
- * Have already had one Named Storm (Tropical Storm Alex)



Hurricane Season Outlook

- * NOAA Forecast for above average season (similar to 2021 season)
 - * Note: A Detailed Analysis of the 2021 Hurricane Season and specific impacts to the DRB is now available on the DRBC website as part of the Annual Hydrologic Conditions Report
- * Hurricane Season began June 1 and ends November 30
- * Peak season is in September
- * Have already had one Named Storm (Tropical Storm Alex)

